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	4: Van Snick J, Houssiau F, Proost P, Van Damme J, Renauld JC.  I-309/T cell activation gene-3 chemokine protects murine T cell lymphotodexamethasone-induced apoptosis.  J Immunol. 1996 Sep 15;157(6):2570-6. PMID: 8805659; UI: 96399088	elated Articles mas against
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	Production of IL-8 and monocyte chemotactic peptide-1 by peripheral by monocytes. Disparate responses to phytohemagglutinin and lipopolysac J Immunol. 1994 Jan 1;152(1):241-9. PMID: 8254194; UI: 94075828	
	7: Antony VB, Godbey SW, Kunkel SL, Hott JW, Hartman DL, Burdick MD, Strieter RM.  Recruitment of inflammatory cells to the pleural space. Chemotactic cy	Related Articles ytokines, IL-8,

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characterization of the polypeptide encoded thereby by employing those methods that were old and well known in the art at of molecular biology at the time the invention was made would have been prima facie obvious to an artisan having ordinary skill. The motivation is to further characterize the properties of the isolated channel protein in a lipid bilayer system.

### Conclusion

8. No claims are allowed.

## Advisory Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph F. Murphy whose telephone number is 703-305-7245. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on 703-308-3973. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-308-0294 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Joseph F. Murphy, Ph. D. Patent Examiner Art Unit 1644 December 27, 1999

and monocyte chemotactic peptide-1 in human pleural fluids. J Immunol. 1993 Dec 15;151(12):7216-23. PMID: 8258721; UI: 94081372 ☐8: Rowell DL, Eckmann L, Dwinell MB, Carpenter SP, Raucy JL, Yang SK, Kagnoff Related Articles Human hepatocytes express an array of proinflammatory cytokines after agonist stimulation or bacterial invasion. Am J Physiol. 1997 Aug;273(2 Pt 1):G322-32. PMID: 9277410; UI: 97423468 Related Articles 9: Gautam SC, Noth CJ, Janakiraman N, Pindolia KR, Chapman RA. Induction of chemokine mRNA in bone marrow stromal cells: modulation by TGF-beta 1 and IL-4. Exp Hematol. 1995 Jun;23(6):482-91. PMID: 7768303; UI: 95285906 Related Articles 10: Casselman BL, Kilgore KS, Miller BF, Warren JS. Antibodies to neutrophil cytoplasmic antigens induce monocyte chemoattractant protein-1 secretion from human monocytes. J Lab Clin Med. 1995 Nov;126(5):495-502. PMID: 7595035; UI: 96074349 Related Articles 11: Tanaka H, Minoshima T, Endo N. The effect of a synthetic 7-thiaprostaglandin E1 derivative, TEI-6122, on monocyte chemoattractant protein-1 induced chemotaxis in THP-1 cells. Br J Pharmacol. 1995 Oct;116(4):2298-302. PMID: 8564263; UI: 96120619 12: Wenzel UO, Fouqueray B, Grandaliano G, Kim YS, Karamitsos C, Valente AJ, Related Articles Thrombin regulates expression of monocyte chemoattractant protein-1 in vascular smooth muscle cells. Circ Res. 1995 Sep;77(3):503-9. PMID: 7641321; UI: 95368769 Related Articles ☐ 13: Gong JH, Clark-Lewis I. Antagonists of monocyte chemoattractant protein 1 identified by modification of functionally critical NH2-terminal residues. J Exp Med. 1995 Feb 1;181(2):631-40. PMID: 7836918; UI: 95138695 Related Articles, Protein ☐ 14: Zhang YJ, Rutledge BJ, Rollins BJ. Structure/activity analysis of human monocyte chemoattractant protein-1 (MCP-1) by mutagenesis. Identification of a mutated protein that inhibits MCP-1-mediated monocyte chemotaxis. J Biol Chem. 1994 Jun 3;269(22):15918-24. PMID: 8195247; UI: 94253189 Related Articles, Protein, Nucleotide 15: Shyy YJ, Li YS, Kolattukudy PE. Structure of human monocyte chemotactic protein gene and its regulation by TPA. Biochem Biophys Res Commun. 1990 Jun 15;169(2):346-51. PMID: 2357211; UI: 90290466

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vector pT7T3. The polypeptide encoded by this polynucleotide would be identical to a fragment of the polypeptide set forth in SEQ ID NO: 2, thus anticipating claims 5-8.

b. Claims 2, 5-8 rejected under 35 U.S.C. 102(b) as being anticipated by FR 2744730-A1 (1997).

FR 2744730-A1 discloses the cloning of a cDNA sequence encoding a TWIK1 potassium channel. The TWIK1 channel protein disclosed in FR 2744730-A1 contains a stretch of bases from 529-549 that is identical to the polynucleotide sequence set forth in SEQ ID NO: 1 (see Sequence Comparison B, underlined region, attached), thus anticipating claim 2(i). Furthermore, the polynucleotide disclosed in FR 2744730-A1 was cloned into an expression vector, and expressed in oocytes (page 20, first paragraph), thus anticipating claims 5-8.

## Claim Rejections - 35 USC § 103

- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- a. Claims 2 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2744730-A1 (1997).

The disclosure of FR 2744730-A1 is set forth above (section 6b.). However, FR 2744730-A1 does not teach a method for producing the polypeptide encoded by the disclosed polynucleotide. To have incorporated the recombinant DNA identified in the disclosure of FR 2744730-A1 into an expression vector and host cell to facilitate the production and

16: Yoshimura T, Yuhki N, Moore SK, Appella E, Lerman MI, Related Articles, Protein, Nucleotide Leonard EJ.

Human monocyte chemoattractant protein-1 (MCP-1). Full-length cDNA cloning, expression in mitogen-stimulated blood mononuclear leukocytes, and sequence similarity to mouse competence gene JE.

FEBS Lett. 1989 Feb 27;244(2):487-93.

PMID: 2465924; UI: 89153605

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under conditions of moderate stringency, for example, would fail to hybridize under conditions of high stringency. The metes and bounds of the claim thus cannot be ascertained. This rejection could be obviated by supplying specific conditions supported by the specification which Applicant considers to be "stringent". Applicant should specifically point out the support for any amendments made to the disclosure. See MPEP 714.02 and 2163.06

Claim 2, sections (i) and (s), is indefinite in the recitation of the term "fragments". This language is vague and indefinite since it encompasses potentially any portion of the polypeptide including a single amino acid. There is no guidance provided as to what specific sequences the term "fragments" refers to. Therefore, the metes and bounds of the claim are unclear.

# Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- a. Claims 2 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Marra et al (1996).

Marra et al. discloses the cloning of a cDNA which is identical from bases 309 to 331 to the sequence set forth in SEQ ID NO: 1 (see Sequence Comparison A, underlined region, attached). Since this stretch of bases is more than 15 bases long, it is within the limitations of claim 2(i). Furthermore, the sequence disclosed in Marra et al. was cloned into the expression